

## **CLAIMS**

1. A photodetection arrangement including a photo detector;

supply circuitry for biasing the detector into incident light sensitive conduction;

5 a current sensing element in said supply circuitry to sense detector current, said element being selected such that its value is sufficiently low not to contribute a bias disruptive voltage drop due to said conduction of said detector;

a circuit for comparing said sensed current with a reference value; and

10 a circuit for removing said bias when said a reference value is exceeded, said a reference value being selected such that it represents onset of an overload of said detector.

2. The arrangement of claim 1 wherein said circuit for comparing comprises a comparator feeding a latch which is triggered upon an overload being applied to the detector.

15 3. The apparatus claim 2 wherein the latch controls a switch which acts to disconnect or remove said supply to said detector.

4. The arrangement of claim 1, wherein the sense element is a low value series resistor of a value too low to afford detector protection.

5. The apparatus claim 4 wherein value is of the order of 500 ohms.

20 6. The arrangement of claim 1 including a microcontroller arranged to control the supply circuitry, said microcontroller arranged to receive an interrupt upon the onset of overload and the to enter a wait routine to provide a delay before controlling the arrangement to resume normal operation

7. The arrangement of claim 6 and wherein the microcontroller is arranged to reset the latch after said delay.

8. The arrangement of claim 6 wherein the microcontroller monitors detector output and determines a suitable delay based upon logged values before the onset of  
5 overload.

9. The arrangement of claim 1 configured as test apparatus for a photo detector.

10. The arrangement of claim 1 wherein the detector is an avalanche photo diode.

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